

#5

102001-6912E260

FIGURE 1

AFP E1a and E1b Adenovirus Constructs

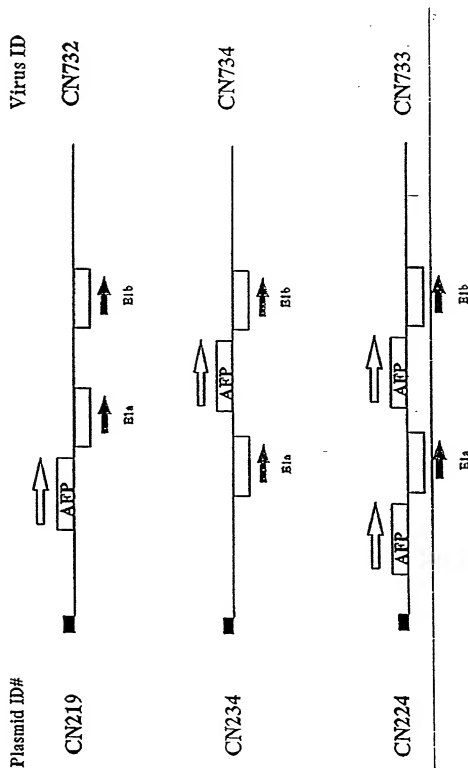
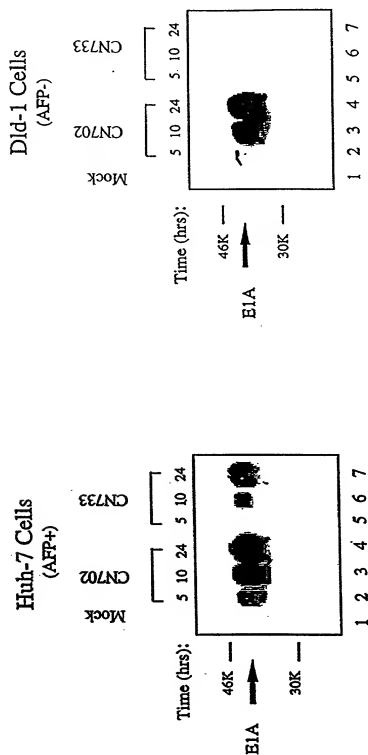
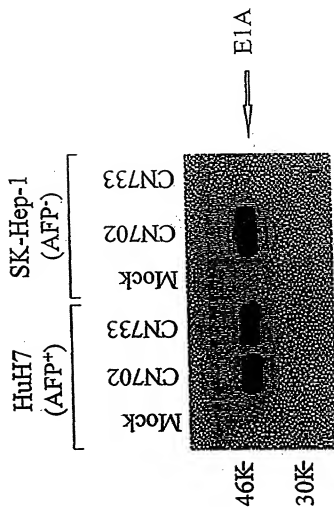


FIGURE 2A



**FIGURE 2B**



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FIGURE 3A

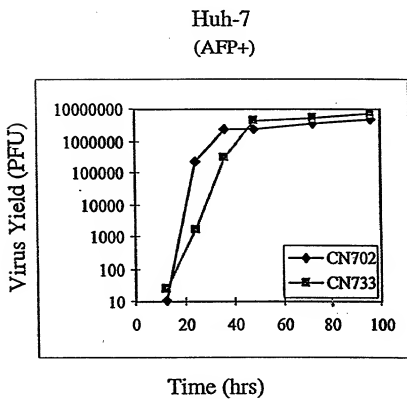
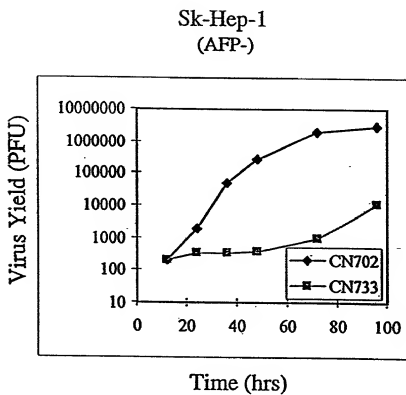


FIGURE 3B



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FIGURE 3C

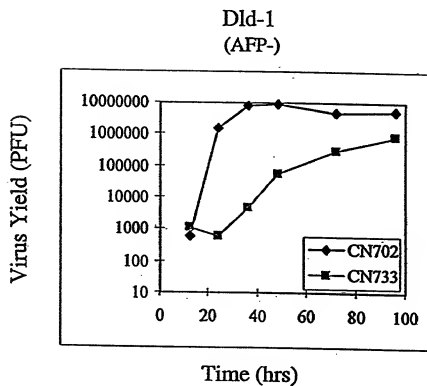


FIGURE 4A

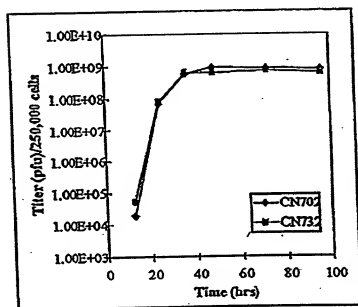
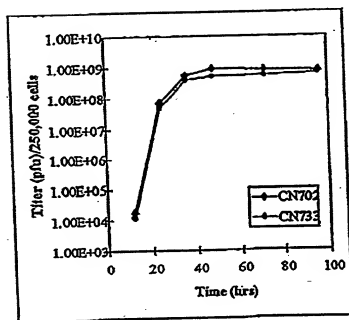


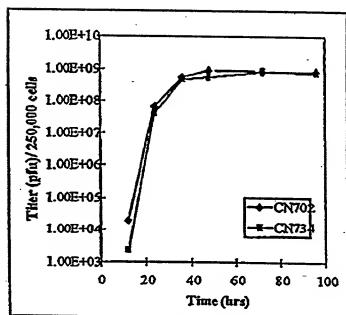
FIGURE 4B



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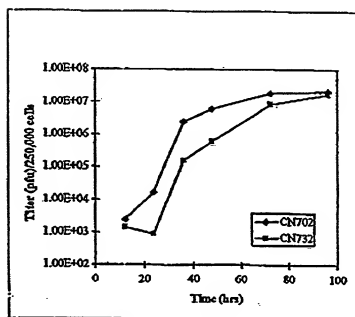


FIGURE 4C



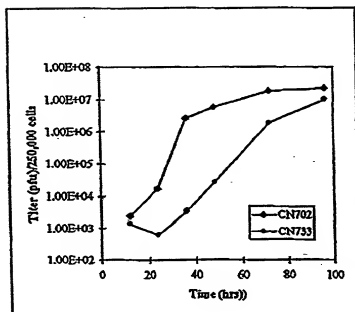
09732169-100201

FIGURE 5A



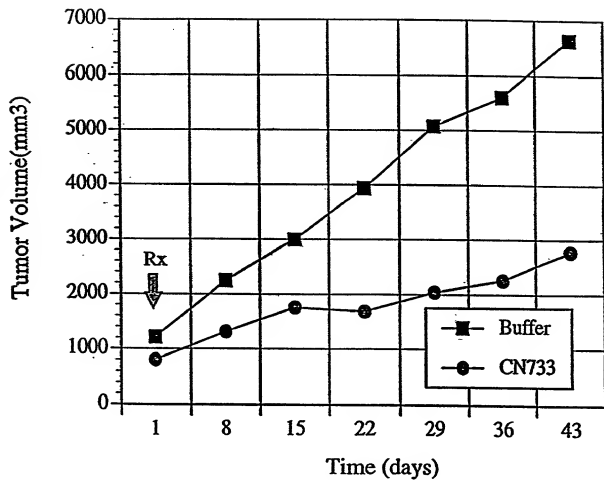
09732169.100201

FIGURE 5B

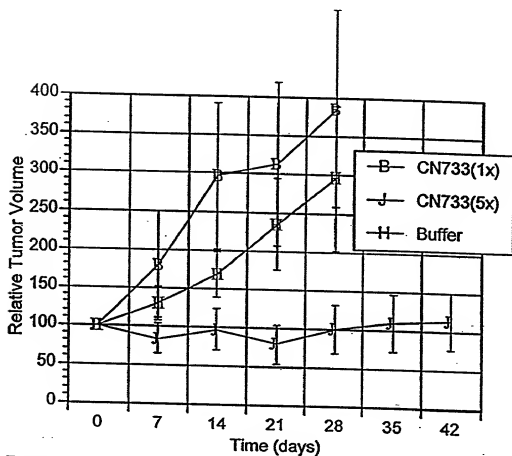


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FIGURE 6A



**FIGURE 6B**



Error bars = standard error

Animals from groups treated with a single dose of CN733 and buffer were sacrificed at 28 days because of excessive tumor burden

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FIGURE 7

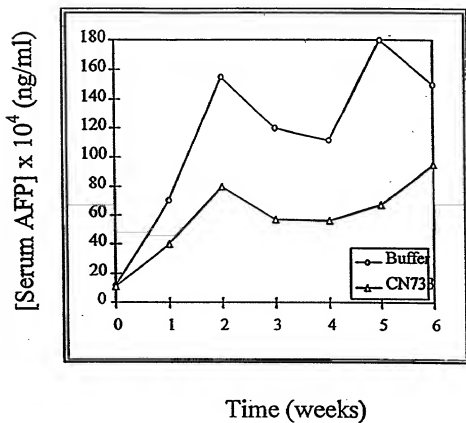
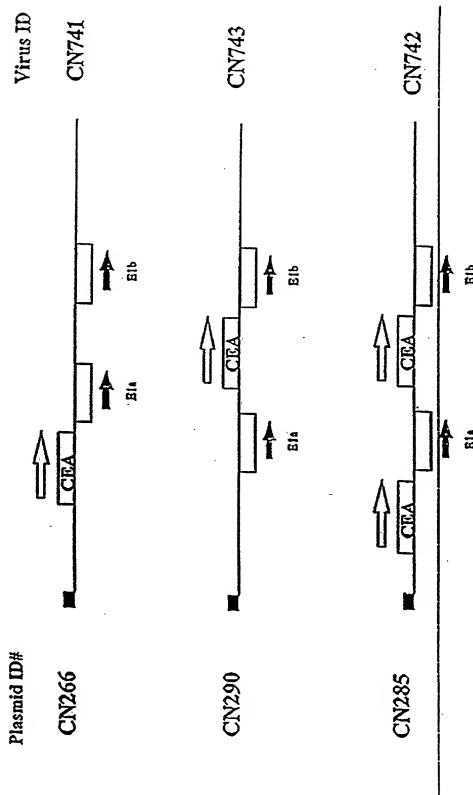


FIGURE 8

CEA E1a and E1b Adenovirus Constructs



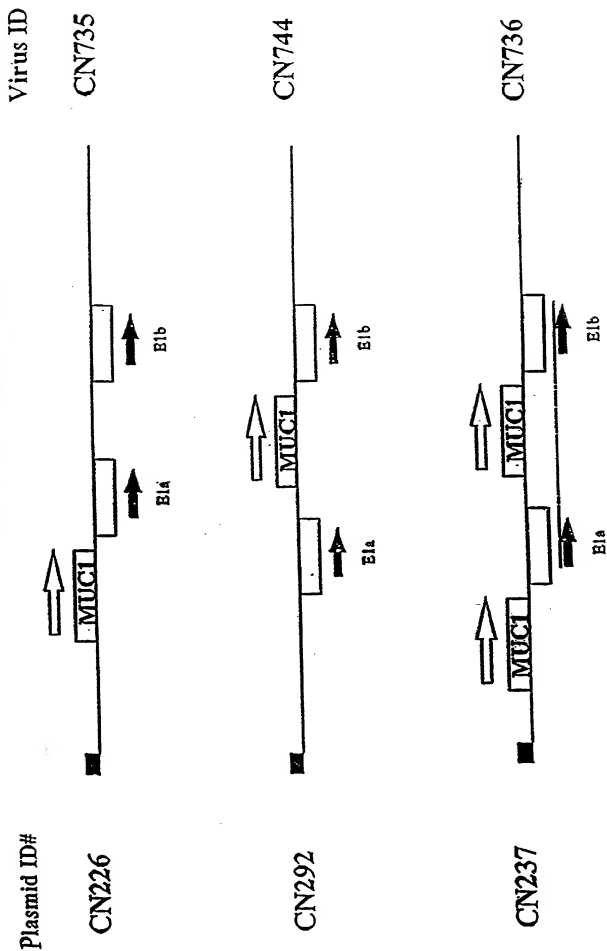
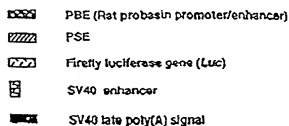


FIGURE 9

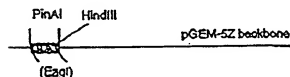


-426  
 5'-AAGCITCCACAAGTGCATTTAGCCTCTCCAGTATTGCTGATGAATCCACAGT  
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 CACCAACATCTATCTGATTGGAGGAATGGATAATAGTCATCATGTTTAAACATCT  
 ACCATTCCAGTTAAGAAAAATATGATAGCATCTTGTCTCTAGTCTTTTCTTAATA  
 ARE-1  
 GGGACATAAAGCCCAAAATAAAAAATATGCCTGAAGAATGGACAGGCATTTGG  
 GCATTGTCCATGCCTAGTAAAGTACTCCAAGAACCTATTGTATACTAGATGACA  
 ARE-2  
 CAATGTCAATGTCTGTGTACAACCTGCCAAGTGGGATGCAAGACACTGCCCATG  
 +1  
 CCAATCATCCTGAAAAGCAGCTATAAAAAAGCAGGAAGCTACTCTGCACCTT  
 CAAT box TATAA box Transcription site  
 +26  
 GTCAGTGAGGTCCAGATACCTACAG-3'

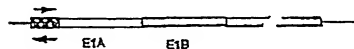
FIGURE 10



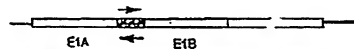
CN249  
 (CN250)  
 CN256  
 CN271



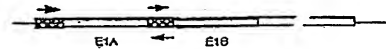
CN251  
 CN253



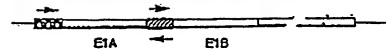
CN254 (CN275)  
 CN255 (CN276)



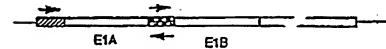
CN268  
 CN260



CN257  
 CN258



CN273  
 CN274



CN280



CN201

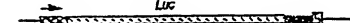


FIGURE 11

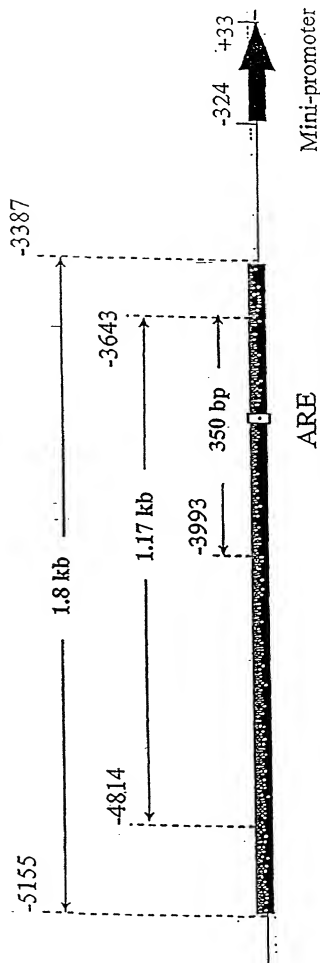


FIGURE 12

10200F 6912E460

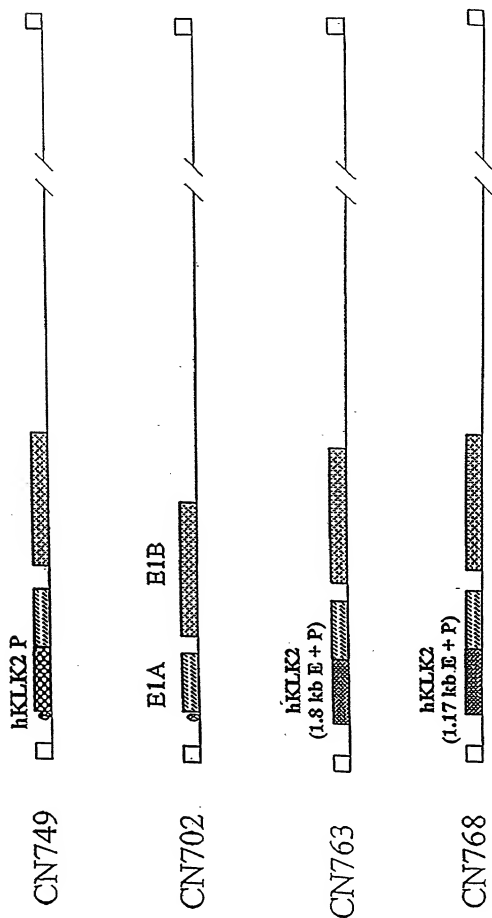


FIGURE 13

# FIGURE 14A

aagcttttta gtgcttta ga cagtgaagctg gtctgtctaa cccaagtga cttgggtcca	60
tactcagccc cagaagtga ggggtgaagct ggggtggagcc aaaccaggca agcctaccct	120
cagggtcccc agtggcctga gaaccattgg acccaggacc cattacttct agggtaagga	180
aggtacaac accagatcca accatggtct ggggggacag ctgtcaaatg cctaaaaata	240
tacctgggag aggagcaggc aaactatcac tgcctcagggt tctctgaaca gaaacagagg	300
ggcaaccca agtccaaatc cagggtgagca ggtgcacca atgcccagag atatgacgag	360
gcaagaagtg aaggaaccac ccctgcacaa aatgttttgc atgggaagga gaagggggtt	420
gtctatgttc ccaatccagg agaatgcatt tgggatctgc cttcttctca ctcttggtt	480
agcaagacta agcaaccagg actctggatt tggggaaaga cgtttatttg tggaggccag	540
tgatgacaat cccacgaggg cctaggtgaa gagggcagga aggtctgaga cactggggac	600
tgagtgaata ccacacccat gatctgcacc acccatggat gctccttcat tgcctacctt	660
tctgttgata tcagatggcc ccattttctg taccttcaca gaaggacaca ggctagggtc	720
tgtgatggc ctctcatccc gggggcatgt gaggacagca ggtgggaag atcatgggtc	780
ctctgggtc ctgcagggcc agaacattca tcaaccatac tgaactccta gatgggaatg	840
gcttccctgg ggctgggcca acggggcctg ggcaggggag aaaggagctc aggggacagg	900
gaggaagggt catcgagacc cagcctggaa ggttcttctg tctgaccatc caggatttac	960
ttcctgcat ctacctttg tcattttccc tcagcaatga ccagctctgc ttctgatct	1020
cagcctccca ccttgagacc agcacccag tccctggccc ggctgcaccc acccaatacc	1080
ctgataaccc aggacccatt acttctaggg taaggagggt ccaggagaca gaagctgagg	1140
aaaggtctga agaagtcaca tctgtcctgg ccaggaggga aaaacaccca gatgctgaac	1200
caggagaatg ttgaccagg aaagggaccg aggaccgaag aaaggagtc gaccaccaag	1260
gtttgcctga gaggaaggat caaggcccg agggaaagca gggctggctg catgtgcagg	1320
acactgggtg ggcataatgt tcttagattc tccctgaatt cagtgtccct gccatggcca	1380
gactctctac tcaggcctg acatgctgaa ataggacaat ggccttgcc tctctccca	1440
ccatttgga agagacataa aggacattcc aggacatgcc ttctgggag gtcagggttc	1500
tctgtctcac acctcagga ctgtagttac tgcacagcc atggtaggtg ctgactcac	1560
ccagcctgtc caggcccttc cactctccac tttgtgacca tgtccaggac cccccctag	1620
atctcgagcc tgcaaatacc cccttgctgg gtgggtggat tcagtaacaa gtgagctcct	1680

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# FIGURE 14B

atccagcccc cagagccacc tctgtcacct tectgtggg catcatecca ccttcacaag	1740
cactaaagag catggggaga cctggctagc tgggtttctg catcacaag aaaataatcc	1800
cccaggttcg gattcccagg gctctgtatg tggagctgac agacctgagg ccaggagata	1860
gcagaggtca gccctaggga ggggtgggtca tccacccagg ggacagggtg gcaccagcct	1920
tgctactgaa agggcctccc caggacagcg ccatcagccc tgccctgagag ctttgcataa	1980
cagcagtcag aggaggccat ggcagtggct gagctcctgc tccaggcccc aacagaccag	2040
accaacagca caatgcagtc cttccccaac gtcacaggtc accaaaggga aactgaggtg	2100
ctacctaac ttagagccat caggggagat aacagcccaa ttccccaac aggccagttt	2160
caatcccatg acaatgacct ctctgtctc attcttccca aaataggagc ctgattctcc	2220
cccaccatgg atttctccct tgtcccgga gcctttctg cccctatga tctgggact	2280
cctgacacac acctctctc tggtagcata tcagggtccc tcactgtcaa gcagtcaga	2340
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gggcagatgc ctggagcagg agctggcggg gccacaggga gaaggtgatg caggaaaggga	2520
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acgtggcttc ctgctctgta tatggggtg gggattccat gcccataga accagatggc	2700
cggggttcag atggagaagg agcaggacag gggatcccca ggataggagg accccagtgt	2760
cccccccag gcagggtgact gatgaatgg catgcagggt cctcctgggc tgggtctcc	2820
ctttgtccct caggattcct tgaaggaaca tccggaagcc gaccacatct acctggtggg	2880
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tgggggcccc aaagagagaa acctgagggc aggcaggacc tggctgagg aggcattgga	3000
gccagatgg ggagatggat gtcaggaaag gctgccccat cagggagggt gatagcaatg	3060
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ctgcccatcc actacctct ctgctccagc cactctgggt ctttctccag atgcctgga	3240
cagcctggc ctgggctgt cccctgagag gtgttgggag aagctgagtc tctggggaca	3300
ctctcatcag agtctgaaag gcacatcag aaacatccct ggtctccagg actaggcaat	3360

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# FIGURE 14C

gaggaaaggg cccagctcc tccctttgcc actgagaggg tcgacccctgg gtggccacag	3420
tgacttctcgc gtctgtccca gtcacccctga aaccacaaca aaaccccagc cccagacccct	3480
gcagggtacaa tacatgtggg gacagtctgt acccagggga agccagtctc ctcttcctag	3540
gagaccgggc ctgagggtcg tgcccggggc aggcgggggc agcacgtgcc tgtccttgag	3600
aactcgggac cttaagggtc tctgctctgt gaggcacagc aaggatcctt ctgtccagag	3660
atgaaagcag ctccctgccc tcctctgacc tcttcctcct tcccaaatct caaccaacaa	3720
ataggtgttt caaatctcat catcaaatct tcacccatcc acatgagaaa gctttaaacc	3780
caatggattg acaacatcaa gaggttgaac aagtggacat ggagatgtta ctgtggaaa	3840
tttagatgtg ttcagctatc gggcaggaga atctgtgtca aattccagca tgggtcagaa	3900
gaatcaaaaa gtgtcacagt ccaaatgtgc aacagtgcag ggataaaaaa tgtgtgcat	3960
tcaaactgag ggtatatttg gaacatgaga aaggaaggga ttgctgctgc acagaacatg	4020
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aattccacct ctataaagtt tccaagagga aaacccaatt ctgctgctag agatcagaat	4140
ggaggtgacc tgtgccttgc aatggctgtg agggtcacgg gagtgtcact tagtgacggc	4200
aatgtgcctg atcttaatct gggcagggtc ttcatgagca cataggaatg cagacattac	4260
tgctgtgttc attttacttc accggaaaag aagaataaaa tcagccgggc gcggtggctc	4320
acgcctgtaa tcccagcact ttagaaggct gaggtgggca gattacttga ggtcaggagt	4380
tcaagaccac cctggccaat atggtgaaac cccggctcta ctaaaaatac aaaaattagc	4440
tgggcatggt ggtgcgcgcc tgtaatccca gctactcggg aggctgaggg tggaacaattg	4500
cttggaacca ggaagcagag gttgcagtga gccaagattg tgccactgca ctccagcttg	4560
ggcaacagag ccagactctg taaaaaaaaa aaaaaaaaaa aaaaaagaa agaaagaaa	4620
agaaaagaaa gtataaaatc tctttgggtt aacaaaaaaa gatccacaaa acaaacacca	4680
gctcttatca aacttacaca actctgccag agaacaggaa acacaaatac tcattaactc	4740
acttttgtgg caataaaacc ttcatgtcaa aaggagacca ggacacaatg aggaagttaa	4800
actgcaggcc ctacttgggt gcagagaggg aaaatccaca aataaaacat taccagaagg	4860
agctaagatt tactgcattg agttcatgcc ccaggatatg aaggtgattt taacacctga	4920
aaatcaatca ttgcctttac tacatagaca gattagctag aaaaaaatta caactagcag	4980
aacagaagca atttggcctt cetaaaatc cacatcatat catcatgatg gagacagtgc	5040
agacgccaat gacaataaaa agagggacct ccgtcaccgc gtaaacatgt ccacacagct	5100

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# FIGURE 14D

ccagcaagca cccgtcttcc cagtgaatca ctgtaacctc cctttaate agccccaggc	5160
aaggctgcct gcgatggcca cacaggctcc aacctgtggg cctcaacctc ccgcagaggc	5220
tctectttgg ccaccccatg gggagagcat gaggacaggg cagagccctc tgatgccac	5280
acatggcagg agctgacgcc agagccatgg gggctggaga gcagagtgc tggggtcaga	5340
gcttctctgag gacacccagg cctaaggga ggcagctccc tggatggggg caaccaggct	5400
ccgggtccca acctcagagc ccgcatggga ggagccagca ctctaggcct ttcttagggt	5460
gactctgagg ggacctgac acgacaggat cgctgaatgc acccgagatg aaggggccac	5520
cacgggaccc tgctctcgtg gcagatcagg agagagtggg acaccatgcc agggcccat	5580
ggcatggctg cgactgaccc agggccactcc cctgcattga tcagcctcgg taagtacat	5640
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aaggtcagtg caaagagagg ccatgagcag ttaggaaggg tggccaacc tacagcaca	5760
acctcatct atcataagta gaagccctgc tccatgaccc ctgcatttaa ataaacgttt	5820
gttaaatgag tcaaatccc tcacatgag agctcacctg tgtgtaggcc catcacacac	5880
acaaacacac acacacacac acacacacac acacacacac acagggaaag tgcaggatcc	5940
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cctgggcccc atcagctcag agacctgtg agggctgaga tggggctagg caggggagag	6060
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ggagggggct gcaggagct ggggtactgc ctccaggag ggggctgcag ggagctgggt	6180
actgccctcc agggaggggg ctgcaggag ctgggtactg cctccaggg agggggctgc	6240
agggagctgg gtactgcct ccaggaggc agggactg tcccaacag agagcacatc	6300
ttctgcagc agctgcacag acacaggagc cccatgact gccctgggc aggggtgtga	6360
ttccaaattt cgtgccccat tgggtgggac ggaggtgac cgtgacatcc aaggggcac	6420
tgtgattcca aacttaaact actgtgccta caaatagga aataacctta cttttctac	6480
tatctcaaat tcctaagca caagctagca cctttaaat caggaagttc agtcaactc	6540
ggggctctcc catgccccca gtctgacttg caggtgcaca ggggtgctga catctgtcct	6600
tgctctctct ctgtgtcaa ctgcccccc tctgggggt gactgatggt caggacaagg	6660
gactctagag ctggcccat gattgacagg aaggcaggac ttggcctcca ttctgaagac	6720
taggggtgtc aagagagctg ggcateccac agagctgcac aagatgacgc ggacagagg	6780

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# FIGURE 14E

tgacacaggg ctacagggctt cagacgggtc gggaggctca gctgagagtt cagggacaga	6840
cctgaggagc ctacagtggga aaagaagcac tgaagtggga agttctggaa tgttctggac	6900
aagcctgagt gctctaagga aatgctccca ccccgatgta gcctgcagca ctggacggtc	6960
tgtgtacctc ccgctgccc atcctctcac agcccccgc tctagggaca caactcctgc	7020
cctaactgc atctttcctg tctcattcca caaaaaggg cctctgggtt ccctgttctg	7080
cattgcaagg agtggaggtc acgttccac agaccacca gcaacagggt cctatggagg	7140
tgcggtcagg aggatcacac gtcccccat gcccaggga ctgactctgg ggggatgaga	7200
ttggcctgga ggccactggt cccctctgtc cctgagggga atctgaccc tggaggctgc	7260
cacatccctc ctgattcttt cagctgaggg cccttcttga aatccagggt aggaactaac	7320
ccccactggg aaaggcccag tgtggacgggt tccacagcag cccagctaag gcccttggac	7380
acagatcctg agtgagagaa cctttaggga cacagggtgc cggccatgtc cccagtgtcc	7440
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agattgaggg tctctccttg agtccctgat gctgtccag gagctcccc ctgagcaaat	7620
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aaggggagc atgagctcca ggaaggcga tggcgtctc tagtgggcgc ctctgttaa	7740
tgagcaaaa ggggccagga gaggtagag atcagggtctg gccttggact aaggctcaga	7800
tggagaggac tgaggtgcaa agagggggct gaagtgggg agtggctggg agagatggga	7860
ggagcagga aggggaagcc ccaggaggc cgggggaggg tacagcagag ctctccactc	7920
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gcaccatctg gggactctac ccactaatg ccagcaggac tccctccca agctctaaca	8040
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agaagaatca caagtgtgag aggggtagaa actgcagact tcaaaatctt tcaaaaagag	8220
ttttacttaa tcagcagtt gatgtccag gagaagatac atttagagtg ttagagtg	8280
atgccatg gctgcctgt cctcacagca ggagcagagt ggggtttcca agggcctgta	8340
accacaactg gaatgacact cactgggtta cattacaaag tggaatgtgg ggaattctgt	8400
agactttggg aagggaatg tatgacgtga gccacagcc taaggcagtg gacagccac	8460
tttgaggctc tcacatcta ggagacatct cagccatgaa catagccaca tctgtcata	8520

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# FIGURE 14F

gaaacatgt tttattaaga ggaaaaatct aggctagaag tgctttatgc tcttttttct	8580
ctttatgttc aaattcatat acttttagat cattccttaa agaagaatct atccccctaa	8640
gtaaatgta tcaactgactg gatagtgttg gtgtctcact cccaacccct gtgtgggtgac	8700
agtgcctctg tccccagcc ctgggccctc tetgattcct gagagctttg ggtgctcctt	8760
cattaggagg aagagaggaa ggggtgtttt aatattctca ccattcacc atccacctct	8820
tagacactgg gaagaatcag ttgccactc ttggattga tcctcgaatt aatgacctct	8880
atttctgtcc ctgtgccatt tcaacaatgt gacaggccta agagggtgct tctccatgtg	8940
atttttgagg agaaggttct caagataagt tttctcacac ctctttgaat tacctccacc	9000
tgtgtcccca tcaccattac cagcagcatt tggacccttt ttctgttagt cagatgcttt	9060
ccacctcttg aggggtgata ctgtatgtct tctacacagg aatatgcaga ggaaatagaa	9120
aaaggggaat cgcattacta ttccagagaga agaagacctt tatgtgaatg aatgagagtc	9180
taaaatccta agagagccca tataaaatta ttaccagtgc taaaactaca aaagttacac	9240
taacagtaaa ctagaataat aaacatgca tcacagttgc tggtaaaact aaatcagata	9300
tttttttctt agaaaaagca ttccatgtgt gttgcagtga tgacaggagt gcccttcagt	9360
caatatgtcg cctgtaattt ttgttccctg gcagaatgta ttgtcttttc tccctttaaa	9420
tcttaaatgc aaaactaaag gcagctcctg ggccccctcc ccaaagtcag ctgcctgcaa	9480
ccagccccac gaagagcaga ggctgagct tcctgtgcca aaataggggg ctaggaggct	9540
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ctggagggtg gtgagcctca ctgtggcct gatgcttacc ttgtgccctc acaccagtgg	9660
tcaactggaac cttgaacact tggctgtcgc ccggtatctgc agatgtcaag aacttctgga	9720
agtcaaatga ctgccactt ctccagggca gatacctgtg aacatccaaa accatgccac	9780
agaaccctgc ctggggtcta caacacatat ggactgtgag caccaagtcc agccctgaat	9840
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agcgaggctt ggaggtgctt gcgccacaag cagccccaat ttgctgggag tttcttgcca	9960
cctggtagtg gtgaggagcc ttgggacct caggattact cccttaagc atagtgggga	10020
cccttctgca tccccagcag gtgcccctgt ctccagagcc tctctctctg aggtttaccc	10080
agaccctctg accaatgaga ccatgtgaa gcctcagaga gagagatgga gctttgacca	10140
ggagccgctc ttccttgagg gccagggcag ggaaagcagg aggcagcacc aggagtggga	10200

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# FIGURE 14G

acaccagtgt ctaagccct gatgagaaca ggggtggtctc tcccatatgc ccataccagg	10260
cctgtgaaca gaatcctcct tctgcagtga caatgtctga gaggacgaca tgtttccag	10320
cctaaccgtgc agccatgcc atctaccac tgcctactgc aggacagcac caaccaggga	10380
gctgggaagc tgggagaaga catggaatac ccatggcttc tcacctctc ccagtccagt	10440
gggcaccatt tatgcctagg acaccacct gccggcccca ggctcttaag agtttaggtca	10500
cctaggtgcc tctgggaggc cgaggcagga gaattgcttg aaccgggag gcagaggttg	10560
cagtgcgcg agatcacacc actgcactcc agcctgggtg acagaatgag actctgtctc	10620
aaaaaaaaag agaaagatag catcagtggc taccaagggc taggggcagg ggaaggtgga	10680
gagttaatga ttaatagtat gaagtttcta tgtgagatga tgaaaatgt ctggaaaaaa	10740
aaatatagtg gtgaggatgt agaataattt gaataaatt aacggcattt aattgtacac	10800
ttaacatgat taatgtgca tattttatct tatgtatttg actacatcca agaaacactg	10860
ggagagggaa agcccacat gtaaaataca cccaccctaa tcagatagtc ctctgtgtac	10920
ccaggtacag gccctcatg acctgcacag gaataactaa ggatttaagg acatgaggct	10980
tccagccaa ctgcaggctc acaacataaa tgtatctgca aacagactga gagtaaagct	11040
gggggcacaa acctcagcac tgcaggaca cacacccttc tcgtggatc tgactttatc	11100
tgaccggcc cactgtccag atcttgtgtt gggattggga caaggagggt cataaagcct	11160
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caccagagaa tcaggtagag agaggaagac ggggctcgag gagctgatgg atgacacaga	11340
gcagggttcc tgcagtcac aggtccagct caccctggtg taggtgcccc atccccctga	11400
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agaggaggac acaggctctg tggggctgca gccaggatg ggactaagtg tgaagacatc	11760
tcagcagggt aggccaggtc ccatgaacag agaagcagct cccacctccc ctgatgcagc	11820
gacacacaga gtgtgtgtgt ctgtgcccc agagtcgggc tctctgttc tggccccag	11880
ggagtgaaga gtgaggttga ctgtccctg ctctctctg ctaccccaac attcaacttc	11940

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# FIGURE 14H

tctcatgcc cctctctctc aaatatgatt tggatctatg tccccgccca aatctcatgt	12000
caaattgtaa accccaatgt tggagggtgg gccttgtag aagtgattgg ataagcgggg	12060
tggattttct gctttgatgc tgtttctgtg atagagatct cacatgatct ggtgttttaa	12120
aagtgtgtag cacctctccc ctctctctct ctctctctta ctcatgctct gccatgtaag	12180
acgttctctg ttccccttca cgtccagaa tgattgtaag ttttctgagg cctccccagg	12240
agcagaagcc actatgcttc ctgtacaact gcagaatgat gagcgaatta aacctctttt	12300
ctttataaat taccagctct caggtatttc tttatagcaa tgcgaggaca gactaataca	12360
atcttctact ccagatccc cgcacacgct tagcccaga catcactgcc cctgggagca	12420
tgcacagcgc agcctctgc cgacaaaagc aaagtcacaa aaggtgacaa aaatctgcat	12480
ttggggacat ctgattgtga aagaggagg acagtacact tgtagccaca gagactgggg	12540
ctcaccgagc tgaacctg tagcaacttg gcataacatg tgcatgacc gtgttcaatg	12600
tctagagatc agtggtgagt aaaacagcct ggtctggggc cgctgctgtc cccacttccc	12660
tctgtccac cagaggcgcg cagagttcct cccacctg agcctcccca ggggctgctg	12720
acctccctca gccgggccca cagcccagca gggccacc tcacctgggt cactcgcc	12780
cagctctcc tgcctctcg agctctcac acggaactct tcagctctc cctgcagcct	12840
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aggcagctcc tgtccctac accccctcct tccccggcct cagctgaaag ggctctccc	12960
agggcagctc cctgtgatct ccaggacagc tcagtctctc acaggctccg acgccccta	13020
tgtgtcacc tcacagccct gtcattacca ttaactcctc agtcccatga agttcactga	13080
gcgcctgtct cccggttaca ggaactct gtgacagga ccagctgtgt cctgctctct	13140
gtggaatccc agggcccagc ccagtgcctg acacggaaca gatgtccat aaatactggt	13200
taaatgtgtg ggagatctct aaaaagaagc atatcacctc cgttgggccc ccagcagtc	13260
gagtctgttc catgtggaca caggggcact ggcaccagca tgggaggagg ccagcaagtg	13320
cccgcggctg cccaggaat gaggcctcaa ccccagagc ttcagaaggg aggcagagg	13380
cctgcaggga atagatcctc cggcctgacc ctgcagccta atccagagt cagggtcagc	13440
tcacaccagc tcgacctg tcagcatccc tagggcagtt ccagacaagg ccggaggtct	13500
cctcttgccc tccaggggt gacattgcac acagacatca ctcaggaac ggattccct	13560
ggacaggaac ctggctttgc taaggaagtg gaggtggagc ctggtttcca tccctgtctc	13620

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# FIGURE 14I

caacagacccc ttctgatctc tcccacatac ctgctctgtt cctttctggg tectatgagg	13680
accctgttct gccaggggtc cctgtgcaac tccagactcc ctctcgttac caccatgggg	13740
aaggtggggg gatcacagga cagtacgctt cgcagagaca gagaccacc aggactgtca	13800
gggagaacat ggacagggcc tgagccgcag ctacggcaac agacacggag agggaggggtc	13860
cccctggagc cttccccaag gacagcagag cccagagtca cccacctccc tccaccacag	13920
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tgagacctct gggcctgggt ctccatccct gggtcagtgg cggggttggt ggtactggag	14040
acagagggct ggtccctccc cagccaccac ccagttagcc tttttctagc cccagagcc	14100
acctctgtca ctttctgtt gggcatcatc ccacctccc agagccctgg agagcatggg	14160
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agacccaag acagaacaca gcagaggtca gactgggga agacaggtt tctccagg	14280
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aaagaccaca cccatgaccc acgtgatgct gagaagtact cctgccctag gaagagactc	14460
agggcagag gagggaaggac agcagaccag acagtcacag cagccttgac aaaacgttcc	14520
tggaactcaa gctcttctcc acagaggagg acagagcaga cagcagagac catggagtct	14580
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caagagtctt attttctag ttaattgtca ctggccacta cgtttttaaa aatcataata	14880
actgcatcag atgacacttt aaataaaac ataaccaggg catgaaacac tgtctcatc	14940
cgctaccgc ggacattgga aaataagccc caggctgtgg agggccctgg gaacctcat	15000
gaactcatcc acaggaatct gcagcctgtc ccaggcactg ggggtgcaacc aagatc	15056

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## FIGURE 15A

aagcttctag ttttcttttc cgggtgacat cgtggaaagc actagcatct ctaagcaatg 60  
atctgtgaca atattcacag tgtaatgcc a tccagggaac tcaactgagc cttgatgtcc 120  
agagattttt gtgttttttt ctgagactga gtctcgctct gtgccaggct ggagtgcagt 180  
ggtgcaacct tggctcactg caagctccgc ctctctgggt cagccattc tctcgctca 240  
gcctctgag tagctgggac tacaggcacc cgccaccaag cctggctaatt tttttgtat 300  
tttttagata gatgggggtt cactgtgtta gccaggatgg tctcagttc ctgacctcgt 360  
gatctgccca ccttggcctc ccaaagtgtc gggatgacag gogtgagcca cgcgcctgg 420  
ccgatatcca gagatttttt ggggggctcc atcacacaga catgttgact gtcttcattg 480  
ttgactttta gtatccagcc cctctagaaa tctagctgat atagtgtggc tcaaaaacct 540  
cagcacaaa acacccgta gactatctgg tgtggcccaa accttcagggt gaacaaaggg 600  
actataatct ggcaggatat tccaaagcat tagagatgac ctcttgcaaa gaiaaagaaa 660  
tggaaaagaa aaagaagaa aggaiaaaaa aiaaiaaaaa gagatgacct ctcaggctct 720  
gaggggaaac gcctgaggtc tttgagcaag gtctgtctc tgttgacag tctccctcac 780  
agggtcattg tgacgatcaa atgtggtcac gtgtatgagg caccagcaca tgcctggctc 840  
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ggtgaccaga gcagtctagg tggatgctgt gcagaagggg tttgtgccac tggtgagaaa 1560  
cctgagatta ggaatcctca atcttatact gggacaaact gcaaacctgc tcagcctttg 1620  
tctctgatga agatattatc ttcattgatct tggattgaaa acagacctac tctggaggaa 1680

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## FIGURE 15B

catattgtat cgattgtcct tgacagtaaa caaatctgtt gtaagagaca ttatctttat 1740  
tatctaggac agtaagcaag cctggatctg agagagatat catcttgcaa ggatgacctgc 1800  
tttacaaca tccttgaaac aacaatccag aaaaaaaaaa gtgttgctgt ctttgctcag 1860  
aagacacaca gatacgtgac agaaccatgg agaattgcct cccaacgctg ttcagccaga 1920  
gccttcacc cttgtctgca ggacagtctc aacgttccac cattaataac ttctttctate 1980  
acatcctgct tctttatgcc taaccaaggt tctaggtccc gatcgactgt gtctggcagc 2040  
actccactgc caaaccaga ataaggcagc gtcaggatc cgaaggggc atggctgggg 2100  
atcagaactt ctgggtttga gtgaggagtgt ggtccacct cttgaatttc aaaggaggaa 2160  
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catccactca tcatccagca tcacactctg aggggtgtgc cagcaccatg acgtcatgtt 2640  
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ggggaggagg caatggacag gcttgagaac ggggatgtgg ttgtatttgg ttttctttg 3120  
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accagttagg atggaggatc agattggagt tgggttagag atggggtaaa attgtgctcc 3300  
ggatgagttt gggattgaca ctgtggaggt ggtttgggat ggcattgctt tgggatggaa 3360

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# FIGURE 15C

atagatttgt tttgatgttg gctcagacat ccttggggat tgaactgggg atgaagctgg 3420  
 gtttgatttt ggaggtagaa gacgtggaag tagctgtcag atttgacagt ggccatgagt 3480  
 tttgtttgat ggggaatcaa acaatggggg aagacataag ggttggcttg ttaggttaag 3540  
 ttgcgttggg ttgatgggtg cggggctgtg tataatgcag ttgattgttg ttgtattaaa 3600  
 ttgggttggg tcaggttttg gttgaggtg agttgaggat atgcttgggg acaccggatc 3660  
 catgaggttc tcaactggagt ggagacaaac ttcctttcca ggatgaatcc agggaagcct 3720  
 taattcacgt gtaggggagg tcaggccact ggctaagtat atccttccac tcacagctcta 3780  
 agatggtctt aaattgtgat tatctatata cacttctgtc tcctcactg tgcttggagt 3840  
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 ttttttttga gacagagtct cactctgttg cccaggctgg agtgacatgg cgcagtctcg 3960  
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 gctgggatta caggcatgca gcaccatgcc cagetaattt ttgtattttt agtagagatg 4080  
 gggtttcacc aatgtttgcc aggctggcct cgaactcctg acctggtgat ccacctgcct 4140  
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 attcttgaga cacagctcgg gctggatcaa gtgagctact ctggttttat tgaacagctg 4260  
 aaataaccaa ctttttgaa attgatgaaa tcttacggag ttaacagtg aggtacagg 4320  
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 aatctttttt tttttttttt taaatcgagg tttcagtcct attctatttc ccaggctgga 4440  
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 tgcttcggtc tccaatagc taagactaca gtagtccacc acctatacca gataattttt 4560  
 aaattttttt gggggccggg cacagtggct cagcctgta atcccaacac catgggaggc 4620  
 tgagatgggt ggatcacgag gtcaggagt ttgagaccag ctgaccaaca tggtgaaact 4680  
 ctgtctctac taaaaaaaaa aaaaatagaa aaattagccc ggcgtggtgg cacacggcac 4740  
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 ggttgcaatg agccgagatt gcgccactgc actccagcct gggtgacaga gtgagactct 4860  
 gtctcaaaaa aaaaaaattt tttttttttt tttgtagaga tggatcttgc tttgtttctc 4920  
 tggttggcct tgaactcctg gcttcaagt atctctac cttggcctcg gaaagtgtg 4980  
 ggattacagg cgtgagccac catgactgac ctgtcgttaa tcttgaggta cataaacctg 5040  
 gctcctaaag gctaaggctt aaatatgttg tggagaaggg gcattggatt ttgcatgagg 5100

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## FIGURE 15D

atgattctga cctgggaggg caggtcagca ggcattcttg ttgcacagat agagtgtaca 5160  
ggtctggaga acaaggagtg gggggttatt ggaattccac attgtttgct gcacgttgga 5220  
ttttgaaatg ctagggaact ttgggagact catatttctg ggctagagga tctgtggacc 5280  
acaagatctt tttatgatga cagtagcaat gtatctgttg agctggattc tgggttggga 5340  
gtgcaaggaa aagaatgtac taaatgcaa gacatctatt tcaggagcat gaggaataaa 5400  
agttctagtt tctggtctca gagtgggtgca gggatcaggg agtctcaca tctcctgagt 5460  
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gatctagtaa ttgcagaaca gcaagtgcta gctctccctc ccttccaca gctctgggtg 5700  
tgaggagggg ttgtccagcc tcacagcagca tggggagggc cttggtcagc ctctgggtgc 5760  
cagcagggca ggggcggagt cctggggaat gaaggtttta tagggctcct gggggaggct 5820  
ccccagcccc aagett 5836

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## FIGURE 16A

gaattcagaa ataggggaag gttgaggaag gacactgaac tcaaagggga tacagtgtatt 60  
ggtttatttg tcttctcttc acaacatttg tgctggagga attcccaccc tgagggttatg 120  
aagatgtctg aacacccaac acatagcact ggagatatga gctcgacaag agtttctcag 180  
ccacagagat tcacagccta gggcaggagg acactgtacg ccaggcagaa tgacatggga 240  
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agagggcagg gtgaactctg attcccatgg gggaaatgtga tggctcctgtt acaaatTTTT 360  
caagctggga gggaaataaaa cccattacgg tgaggacctg tggaggggcg ctgccccaac 420  
tgataaagga aatagccagg tgggggacct toccattgta ggggggacat atctggcaat 480  
agaagccttt gagacccttt agggtaacaag tactgaggca gcaataaaaa tgaaattcta 540  
tttttcaact ttatactgca tgggtgtgaa gatattttg tttctgtaca gggggtgagg 600  
gaaaggaggg gaggaggaaa gttcctgcag gtctggtttg gtctgtgtat ccagggggtc 660  
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aaattaaatt ttactttatt ttactttaag ttctgggcta catgtgcagg acgtgcagct 780  
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gtattaagcc cagcatgcat tagctgtttt tctgacgct ctccctctcc ctgactccca 900  
caacaggccc cagtgtgtgt tgttccctc cctgtgtcca tgtgttcca ttgttcagct 960  
cccacttata agtgagaaca tgtgtgtttt ggttttctgt ttctgtgtta gtttgcgtag 1020  
gataatggct tccacctcca tccatgttcc tgcaaaggac gtgatcttat tcttttttat 1080  
ggttgcatag aaattgtttt tacaaatcca attgatattg tatttaatta caagttaatc 1140  
taattagcat actagaagag attacagaag atattaggtta cattgaatga ggaatatat 1200  
aaaataggac gaagtgtaaa tattaggtag gaaaagtata atagtgtaaa gaagtaaaaa 1260  
aaaatatgca tgagttagcag aatgtaaaag aggtgaagaa cgtaaatagt acttttttaga 1320  
ccagattgaa ggacagagac agaaaaattt taaggaaattg ctaaacctatg tgagtgttag 1380  
aagtacagtc aataacatta aagcctcagg aggagaaaag aataggaaag gaggaatat 1440  
gtgaataaat agtagagaca tgtttgatgg attttaaaat atttgaaga cctcacatca 1500  
aaggattcat accgtgcat tgaagaggaa gatggaaaag ccaagaagcc agatgaaagt 1560  
tagaaatatt attggcaaag cttaaatgtt aaaagtccca gagagaaaag atggcagaaa 1620  
tattggcggg aaagaatgca gaacctagaa tataaattca tcccacagct ttggtagtgt 1680

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## FIGURE 16B

gcagctgtag ccttttctag ataatacact attgtcatat atcgettaag cgagtgtaaa 1740  
atgggtctcct cactttattt atttatatat ttatttagtt ttgagatgga gcctcgtctct 1800  
gtctcctaggt ctggagtgca atagtgcgat accactcact gcaacctctg cctcctctgt 1860  
tcaagtgatt ttcttacctc agcctccga gtatgtggga ttacaggtgc gtgccaccac 1920  
acccggctaa tttttgtatt tttttagag acgggggttt gccatgttgg ccaggtctgt 1980  
cttgaactcc tgacatcagg tgatccacct gcttggcct cctaaagtgc tgggattaca 2040  
ggcatgagcc accgtgccca accactttat ttatttttta tttttattt taaatttcag 2100  
cttctatttg aaatacaggg ggcacatata taggattgtt acatgggtat attgaactca 2160  
ggtagtgate atactacca acaggtaggt ttccaacca ctcccctctt ttctctccc 2220  
attctagtag tgtgcagtgt ctattgttct catgtttatg tctatgtgtg ctccaggttt 2280  
agctccacc tgtaagttag aacgtgtggt atttgatttt ctgtccctgt gtttaattcac 2340  
ttaggattat ggcttcacg tccattcata ttgctgtaaa ggatatgatt catttttcat 2400  
ggccatgcag tattccatat tgcgtataga tcacattttc tttctttttt ttttttgaga 2460  
cggagtcttg ctttgctgcc taggctggag tgcagtagca cgatctcggc tcaactgcaag 2520  
cttcaacctc ggggttcaog tcattcttct gtctcagctt cccaagtgc tgggactaca 2580  
ggcgcccgcc accacgtcog gctaattttt ttgtgtgttt tttagtagaga tgggggtttc 2640  
actgtgttag ccaggatggt ctgatctcc tgacctgtg gtccacctgc ctccgtctcc 2700  
caaagtgtcg ggattacagg ggtgagccac tgcgcccgcc ccatatatac cacattttct 2760  
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ttgtgtgcag tgtggcagta gacatatgaa tgaatgtgtc tttttgggat aatgatttgc 2880  
attcctttgg gtatacagtc attaatagga gtgctgggtt gaaoggtggc tctgtttaaa 2940  
attcctttgag aattttccaa actgtttgcc atagagagca aactaattta catttccag 3000  
aacagtatat aagcattccc ttttctccac agctttgtca tcatggtttt ttttttctt 3060  
tattttaaaa aagaatatgt tgttgttttc ccagggtaca tgtgcaggat gtgcaggttt 3120  
gttacatagg tagtaaacgt gagccatggt ggtttgtgc acctgtcaac ccattacctg 3180  
ggtatgaagc cctgctgca tttagctctt tccctaatgc tctcactact gcccaccct 3240  
cacctgaca gggcaaacag acaacctaca gaatgggagg aaatttttgc aatctattca 3300  
tctgacaaag gtcaagaata tccagaatct acaagggaact taagcaaatt tttactttt 3360

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## FIGURE 16C

aataatagcc actctgactg gcgtgaaatg gtatctcatt gtggttttca tttagaatttc 3420  
tctgatgac agtgacgatg agcatttttt catatttggt ggctgctgtg acgtcttttg 3480  
agaagtgtct ctctcatgctt ttggccact ttaatgggat tattttttgc ttttagttt 3540  
aagttcctta tagattctgg atattagact tcttattgga tgcatagttt gtgaatactc 3600  
tcttcattc ttaggttgt ctgtttactc tattgatggc ttcttttgct gtgccgaagc 3660  
atcttagttt aattagaaac cacctgccaa tttttgtttt tgttgcaatt gcttttggg 3720  
acttagtcat aaactctttg ccaaggtctg ggtcaagaag agtatttctt aggttttctt 3780  
ctagaatttt gaaagtctga atgtaaacat ttgcattttt aatgcattct gagttagttt 3840  
ttgtatatgt gaaaggtcta ctctcatttt ctctccctct ttcttttctt ctcttttttc 3900  
ttcttttctt tcttttttc tttctttctt tcttttttc tttctttttg tcttcttttc 3960  
ttcttttctt tctctttctt tctcttttc tttttttttt ttgatggagt attgctctgt 4020  
tgcccagggt gcagtgacg gcgacgatct cggtcactg caacctctgc ctctgggtt 4080  
caactgattc tctgcatca gccttccaag tagctgggat tataggcgcc cgccaccacg 4140  
ccgactaat ttttgtatt ttagtagaga cggggtttgt ccatgttggc caggctggtt 4200  
tgaaactctt gacctcaaac gatctgcctg ccttgccctc ccaagtgtc gggattacag 4260  
gtgtgagcca ctgtgccag ccaagaatgt cattttctaa gaggtccaag aaactcaaga 4320  
tattttggga ccttgagaag agaggaattc atacagggat tacaagcaca gcctaattgc 4380  
aaatctttgg catggcttgg ctccaagact ttaggtcttt aaaagtcgaa tccaaaaatt 4440  
tttataaaag ctccagctaa gctaccttaa aaggggcctg tatggctgat cactcttctt 4500  
gctatacttt acacaaataa acaggccaaa tataatgagg ccaaaattta ttttgcaaat 4560  
aaattggtc tgctatgatt tactcttggt aagaacaggg aaaatagaga aaaatttaga 4620  
ttgcatctga ccttttttct tgaattttta tatgtgccta caatttgagc taaactctga 4680  
attattttct ggttgcaaaa actctctaaa gaagaacttg gtttctattg tcttcgtgac 4740  
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cttacagttc tactcttcaa attattgta tgtgtatctc atagttttcc ttcttttgag 4860  
aaaactgaag ccatggtatt ctgaggacta gagatgactc aacagagctg gtgaatctcc 4920  
tcatatgcaa tccactgggc tcgatctgct tcaaattgct gatgcactgc tgctaaagct 4980  
atacatttaa aacctcact aaaggatcag ggaccatcat ggaagaggag gaaacatgaa 5040  
attgtaagag ccagattctg ggggttagagt gtggaggta gagcaactcc accttgaata 5100

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## FIGURE 16D

agaaggtaaa gcaacctatc ctgaaagcta acctgccatg gtggcttctg attaacctct 5160  
gttctaggaa gactgacagt ttgggtctgt gtcattgcc aaatctcatg ttaaatgtga 5220  
atccccagt- ttcgagggtg ggacttggtg gtaggtgatt cggtcatggg agtagatttt 5280  
cttctttgtg gtgttacagt gatagtgagt gagttctcgt gagatctggt catttaaaa 5340  
tgtgtggccc ctccccctcc tctcttggtc ctctactgc catgtaagat acctgctcct 5400  
gctttgcctt ctaccataag taaaagcccc ctgaggccctc ccgagaagca gatgccacca 5460  
tgcttcctgt acagcctgca gaaccatcag ccaattaaac ctcttttctg tataaattac 5520  
cagtcttgag tatctcttta cagcagtgtg agaacggact aatacaaggg tctccaaaat 5580  
tccaagttta tgtattcttt ctgccaat agcaggtatt taccataaat cctgtcctta 5640  
ggtaaaacaa ccttgatggc atcgtacttc aattgtctta cacattcctt ctgaatgact 5700  
cctccctat ggcatataag ccttgggtct tgggggataa tggcagaggg gtccaccatc 5760  
ttgtctggct gccacctgag acaaggacat ggcttctgtt ggtaagctc tattaaatgt 5820  
ttctttctaa gaaactggat ttgtcagctt gtttctttgg cctctcagct tctcagact 5880  
ttggggtagg ttgcacaacc ctgccacca cgaacaacat gtttaatatg ataatatg 5940  
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aaatgtgtcc aaagatggaa aatgtttgag aactactgtc ccagagattt tctgagttc 6060  
tagagtgtgg gaatatagaa cctggagctt ggcttcttca gcctagaatc aggagtatg 6120  
ggctgaagtc tgaagcttgg cttcagcagt ttggggttgg cttccggagc acatatttga 6180  
catgttgca ctgtgattg gggtttggtt ttgtctctga atcctaattg ctgtccttga 6240  
ggcatctaga atctgaaatc tgtgttcaga attctattat cttgagtagg acatctccag 6300  
tctcgttct ccttcttagg gctggagtct gtagtcagt acccggtctg gcatttcaac 6360  
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agaaccttc cccacttccc tagctgcaat gttaaaccta ggatttctgt ttaataggtt 6480  
catatgaata atttcagcct gatccaactt tacattcctt ctaccgttat tctacacca 6540  
ccttaaaaat gcattcccaa tatattcctt ggattctacc tataatgggt aatcctggct 6600  
ttgccagttt ctagtgcatt aacatactg atttacattc ttttacttta aagtggaaat 6660  
aagagtcct ctgcagagtt caggagttct caagatggcc ctacttctg acatcaattg 6720  
agatttcaag ggagtcgcca agatcatcct caggttcagt gattgctggt agccctcata 6780

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## FIGURE 16E

taactcaatg aaagctgtta tgctcatggc tatggtttat tacagcaaaa gaatagagat 6840  
gaaatcttag caagggaaga gttgcatggg gcaaagacaa ggagagctcc aagtgcagag 6900  
attctctgtt ttttctccca gtggtgtcat ggaagcagt atcttctcca tacaatgatg 6960  
tgtgataata ttcatgttat tgccaatcag ggaactcaac tgagccttga ttatattgga 7020  
gcttggttgc acagacatgt cgaccacctt catggctgaa cttagtact tagccctcc 7080  
agacgtctac agctgatagg ctgtaacca acattgtcac cataaatcac attgttagac 7140  
tatccagtgt ggcccaagct cccgtgtaaa cacaggcact ctaaacaggc aggatatttc 7200  
aaaagcttag agatgacctc ccaggagctg aatgcaaaga cctggcctct ttgggcaagg 7260  
agaatccttt accgcacact ctccctcaaa gggttattgt gaggatcaaa tgtggtcatg 7320  
tgtgtgagac accagcacat gtctggctgt ggagagtgc ttctatgtgt gctaacattg 7380  
ctgagtgtca agaaagtatt aggcattggt ttccagcact acagatgtgc atctaactct 7440  
cacaacatgg ctacaggggt ggccactact gcctcatttg acagaggaaa ggactgtgga 7500  
taagaagggt gtgaccaata ggtcagagtc attctggatg caaggggctc cagaggacca 7560  
tgattagaca ttgtctgcag agaaattatg gctggatgtc tctgccccgg aaagggggat 7620  
gcactttctc tgacccctca tctcagatct tgactttgag gttatctcag acttctctca 7680  
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cactcttccc agctccatct ccagctggcc aggtgtagcc acagtaacta actctttgca 7800  
gagaactata aatgtgtatc ctacagggga gaaaaaaaa aagaactctg aaagagctga 7860  
cattttaccg acttgcaaac acataagcta acctgccagt tttgtgcttg tagaactcat 7920  
gagactctcg ggtcagaggc aaaagatttt attaccoca gctaaggagg cagcatgaac 7980  
tttgtgttca catttgttca ctttgcccc caattcatat gggatgatca gagcagttca 8040  
ggtgatgga cacaggggtt tgtggcaaag gtgagcaacc taggcttaga aatctctaat 8100  
cttataagaa ggtactagca aactgttcca gtctttgtat ctgacggaga tattatcttt 8160  
ataattgggt tgaaagcaga cctactctgg aggaacatat tgtatttatt gtctgaaca 8220  
gtaacaaat ctgctgtaaa atagacgtta actttattat ctaaggcagt aagcaaacct 8280  
agatctgaag gcgataccat cttgcaaggc tatctgctgt acaaatatgc ttgaaaagat 8340  
ggtccagaaa agaaaacggt attattgctt ttgctcagaa gacacacaga aacataagag 8400  
aaccatggaa aattgtctcc caacactgtt caccagagc ctccactct tgtctgcagg 8460  
acagtcttaa catcccatca ttagtgtgtc taccacatct ggcttcaccg tgccctaacca 8520

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## FIGURE 16F

agatttctag gtcaggttcc ccaccatgtt tggcagtgcc ccaactgcaa cccagaata 8580  
agggagtgtc cagaattccg aggggacatg ggtggggatc agaacttctg ggcttgagtg 8640  
cagagggggc ccatactcct tggttccgaa ggaggagag gctggaggtg aatgtccttg 8700  
gagggggagg atgtgggttc tgaactetta aatccccaa ggaggagact ggtaaggtec 8760  
cagcttccga ggtactgacg tgggaatggc ctgagaggtc taagaatccc gtatctctcg 8820  
gaaggagggg ctgaaattgt gaggggttga gttgcagggg ttgttagct tgagactcct 8880  
tggtgggtcc ctgggaagca aggactggaa ccattggctc cagggttttg tgtgaaggta 8940  
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ccatctactc cttactccac ttgagggtaa tcacctctc ttctagtcc acaagagtc 9060  
gcctgcgcga gtataatctg cacatgtgcc atgtcccgag gcctggggca tcateccactc 9120  
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ctggtggatg tggcctgcgt ggtgccaggc cggggcctgg tgtccgataa agatcctaga 9300  
accacaggaa accaggactg aaagggtgta gagaatggcc atatgtcgct gtccatgaaa 9360  
tctcaaggac tttcgggttg agggcacagg agcctgaact tacgggtttg cccagtcaca 9420  
ctgtccctcc aagtgagtct ccagatacg aggcactgtg ccagcatcag cttcatctgt 9480  
accacatctt gtaacaggga ctaccaggga ccctgatgaa caccatgggtg tgtgcaggaa 9540  
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ggaggaggct gtggactggc tcgagaagtg ggatgtggtt gtgtttgatt tcctttggcc 9660  
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caggttggag ttgagttaca gatggggtaa aattctgctt cggatgagtt tggggatttg 9780  
caatctaag gtggtttggg atggcatggc tttgggatgg aaataggttt gtttttatgt 9840  
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aaggaggcta ttagggttgt cttgaattag attaagttgt gttgggttga tgggttgggc 10020  
ttgtgggtga tgtggttga ttgggctgtg ttaattggt ttgggcagg ttttggttga 10080  
ggttatcatg gggatgagga tatgcttggg acatggattc aggtggttct cattcaagct 10140  
gaggcaaatt tcctttcaga cggtcattcc agggaacgag tggttgtgtg ggggaaatca 10200

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## FIGURE 16G

ggccactggc tgtgaatata cctctatcct ggtcttgaat tgtgattata tatgtccatt 10260  
ctgtctccct cactgtactt ggaattgata tggctattca gctggaaatg ggggaagatt 10320  
ttgtcaaat cttgagacac agctgggtct ggcacagcgt aagccttctt tctggtttta 10380  
ttgaacagat gaaatcacat tttttttt aaatcacag aaatcttata gagttaacag 10440  
tggactctta taataagagt taacaccagg actcttatto ttgattcttt tctgagacac 10500  
caaaatgaga tttctcaatg ccaccctaatt tctttttttt tttttttttt tttttgagac 10560  
acagctcggg tcttttgctc tgtcactcag gctggagcgc agtgggtgta tcatagctca 10620  
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ggctacaggt gcttgccacc acacctggct aattaaattt tttttttttt ttgttagaga 10740  
aagggtctca ctttgttgcc ctggctgata ttgaactctt gacttcaagt gattcttcag 10800  
ccttgagctc ccaaagcact gggattgctg gcatgagcca ctcacogtgc ctggcttgca 10860  
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gcattggatt ttgatgagg acaattctga cctaggaggg caggtcaaca ggaatccccg 10980  
ctgtacctgt acgttgtaca ggcattggaga atgaggagtg aggaggcogt accggaaccc 11040  
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gatcatccca accctgttg ctgttcaccc tgagcctgcc ttctctgggt ttgttcccta 11760  
gatcacatct ccattgateca taggcctcgc ccaatctgac ctcacacggt gggaatgctt 11820  
ccagactgat ctagtatgtg tggaaacaga agtgctggct ctcctctccc ttccacagct 11880  
ctgggtgtg gagggggttg tccagcctcc agcagcatgg ggagggcctt ggtcagcatc 11940

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## FIGURE 16H

taggtgccaa cagggcaagg gcggggctct ggagaatgaa ggctttatag ggctctcag 12000  
ggaggcccc cagccccaaa ctgcaccacc tggccgtgga caccggt 12047

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## FIGURE 17

cgagcggccc ctcagcttcg gcgccagcc ccgcaaggct cccggtgacc actagagggc 60  
gggaggagct cctggccagt ggtggagagt ggcaaggag gaccctaggg ttcacggag 120  
cccaggttta ctcccttaag tgaaaatttc ttcccccaact ctcctctggc tttctccaag 180  
gagggaaacc aggctgctgg aaagtcggc tggggcgggg actgtgggtt caggggagaa 240  
cggggtgtgg aacggggacag ggagcgggta gaagggtggg gctattccgg gaagtgggtg 300  
ggggaggggag cccaaaacta gcacctagtc cactcattat ccagccctct tatttctcgg 360  
ccgctctgct tcagtggacc cggggaggggc ggggaagtgg agtggggagac ctagggggtg 420  
gcttcccgac ctgctgtac aggacctcga cctagctggc ttgttcccc atccccacgt 480  
tagttgttgc cctgaggcta aaactagagc ccagggggccc caagtccag actgccctc 540  
ccccctccc cggagccagg gagtgttgg tgaagggggg aggcagctg gagaacaaac 600  
gggtagtcat ggggttgagc gattagagcc cttgtacct acccaggaat ggttggggag 660  
gaggaggaag aggtaggagg taggggaggg ggcgggggtt tgtcacctgt cacctgctcg 720  
ctgtgcctag ggcgggcggg cggggagtgg ggggaccggg ataaagcggg aggcgcctgt 780  
gcccgctcca cctctcaagc agccagcgcc tgcctgaatc tgttctgccc cctccccacc 840  
catttcacca ccaccatg 858

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## FIGURE 18

aagcttccac aagtgcattt agcctctcca gtattgtga tgaatocaca gttcagggtc 60  
aatggcggtc aaaacttgat caaaaatgac cagactttat attcttacac caacatctat 120  
ctgattggag gaatggataa tagtcatcat gtttaaacat ctaccattcc agttaagaaa 180  
atatgatagc atcttgttct tagtcttttt cttaaatagg acataaagcc cacaataaaa 240  
aatatgcctg aagaatggga caggcattgg gcattgtcca tgcctagtaa agtactcaa 300  
gaacctattt gtatactaga tgacacaatg tcaatgtctg tgtacaactg ccaactggga 360  
tgcaagacac tgcccatgcc aatcatcctg aaaagcagct ataaaaagca ggaagctact 420  
ctgcaccttg tcagtgaggt ccagatacct acag 454

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g atg acc ggc tca acc atc gcg ccc aca acg gac tat cgc aac acc act 49  
 Met Thr Gly Ser Thr Ile Ala Pro Thr Thr Asp Tyr Arg Asn Thr Thr  
 1 5 10 15

gct acc gga cta aca tct gcc cta aat tta ccc caa gtt cat gcc ttt 97  
 Ala Thr Gly Leu Thr Ser Ala Leu Asn Leu Pro Gln Val His Ala Phe  
 20 25 30

gtc aat gac tgg gcg agc ttg gac atg tgg tgg ttt tcc ata gcg ctt 145  
 Val Asn Asp Trp Ala Ser Leu Asp Met Trp Trp Phe Ser Ile Ala Leu  
 35 40 45

atg ttt gtt tgc ctt att att atg tgg ctt att tgt tgc cta aag cgc 193  
 Met Phe Val Cys Leu Ile Ile Met Trp Leu Ile Cys Cys Leu Lys Arg  
 50 55 60

aga cgc gcc aga ccc ccc atc tat agg cct atc att gtg ctc aac cca 241  
 Arg Arg Ala Arg Pro Pro Ile Tyr Arg Pro Ile Ile Val Leu Asn Pro  
 65 70 75 80

cac aat gaa aaa att cat aga ttg gac ggt ctg aaa cca tgt tct ctt 289  
 His Asn Glu Lys Ile His Arg Leu Asp Gly Leu Lys Pro Cys Ser Leu  
 85 90 95

ctt tta cag tat gat taa  
 Leu Leu Gln Tyr Asp 307  
 100

FIGURE 19

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